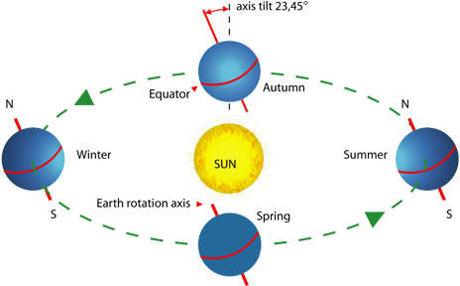
**Motion:**

* Turning or spinning of a body on its \_\_\_\_\_\_\_\_\_\_\_
* Earth’s axis is tilted \_\_\_\_\_ from the \_\_\_\_\_\_\_\_\_\_ (plane of Earth’s orbit around the Sun, and is the apparent path of the Sun throughout the year) {Earth’s tilt varies from 21.5° - 24.5°, this is known as “obliquity” 41k yr. cycle}
* Rate of rotation is \_\_\_\_\_\_ per 24 hour period, but speed of rotation varies depending on location on Earth (speed = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) Speed at the equator = *1035mi/hr*!
* Results in *diurnal* motion (the daily rising and \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of things in the sky
* Period of rotation can be measured in two ways:

-\_\_\_\_\_\_\_\_\_\_\_\_\_\_: relative to the Sun, when the Sun returns to its original position in the sky (when a position on Earth realigns with the Sun) – 24 hours

-\_\_\_\_\_\_\_\_\_\_\_\_\_\_: relative to distant stars, when a star *other than* the Sun returns to its original position in the night sky (when a position on Earth realigns with a star *other than* the Sun) – 23hr. 56min. 4sec.

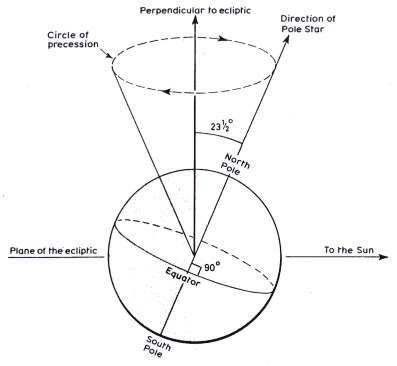
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can affect the rotation of Earth\*

**Motion: ­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

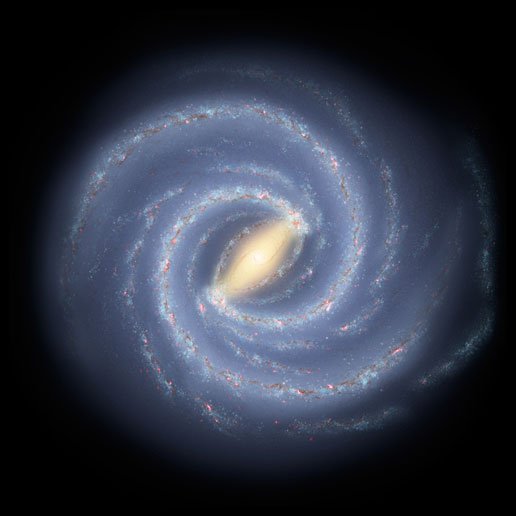
* The motion of a body along its \_\_\_\_\_\_\_\_\_\_ around some point in space
* Earth revolves around the Sun, \_\_\_\_\_\_\_/yr., in an \_\_\_\_\_\_\_\_\_\_\_\_\_ orbit at an avg. speed of *66,500 mi/hr*. (\_\_\_\_\_\_\_ yrs. @ 80mi/hr.!)
* Orbital shape varies – “eccentricity” changes from nearly circular to more elliptical over many hundreds of thousands of years.
* Distance from Sun varies throughout year:
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Pt. at which E is closest to Sun (~Jan 3)
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Pt at which E is furthest from Sun (~July 4)

\*Distance from Sun does NOT cause seasons – Seasons are caused by the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a hemisphere receives in a given 24hr. period which varies b/c of E’s tilted axis and revolution \*see pgs. 481-482

* Revolution also results in *seasonal constellations*

**Motion: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* The “wobble” of the Earth’s \_\_\_\_\_\_\_\_\_, like a spinning top, over a \_\_\_\_\_\_\_\_\_yr. period
* Axes (plural) point to different locations over time
* Changes North/South Stars over time: in the year 14,000AD the “North Star” will be \_\_\_\_\_\_\_\_\_\_\_
* Property of non-spherical objects
* This motion, along with changes in eccentricity and obliquity, affect long-term \_\_\_\_\_\_\_\_\_\_\_ change, and cause ice ages. (Milankovitch Cycles)

**Other Motions: Interstellar, Galactic & Intergalactic**

* The \_\_\_\_\_\_ (along with entire solar system) is moving in the direction of Vega @ 12.5mi/s
* The Sun and other nearby stars are revolving around the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at 155mi/s (one revolution takes 230 million yrs.)
* Milky Way Galaxy is moving in the direction of the neighboring \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Galaxy, and will one day collide! (see wikispace for simulation)

**Vocab:**

* Rotation
* Revolution
* Precession
* Solar Day
* Sidereal Day
* Ecliptic
* Aphelion
* Perihelion
* Axis
* Seasonal Constellations
* Diurnal Motion
* Obliquity
* Eccentricity
* Precession
* Milankovitch Cycles